

ONTARIO INSTITUTE
FOR THE
EDUCATION OF THE BLIND,

FOR THE YEAR ENDING 30TH SEPTEMBER.

1876.

REPORTS

OF

MR. INSPECTOR LANGMUIR.

MR. PRINCIPAL HUNTER.

DR. CORSON, PHYSICIAN.



Toronto:

PRINTED BY HUNTER, ROSE & CO., 25 WELLINGTON STREET WEST.
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INSPECTOR'S REPORT.

As in the case of the Institution for the Deaf and Dumb, the past year has witnessed a large accession to the number of those who have taken advantage of the facilities afforded by the Institution for the Education of the Blind, for the instruction of their blind children. Commencing its first session in 1872, with only an attendance of eleven, there were, on the 30th September this year, no less than 120 pupils in the Institution, with every probability of an increase of that number. The rapid progress of the School cannot be better shown than by giving the number of pupils in attendance during each session since its opening, as follows:—

	Males.	Females.	Total.
First Session	7	14	11
Second "	45	10	55
Third "	49	33	82
Fourth "	68	44	112
Fifth "	72	54	126
Sixth " (Up to 30th Sept., 1876).....	62	58	120

During these sessions a total number of 181 have in some measure derived benefit from the course of instruction imparted in the Institution, many of whom are now established in life, earning their own livelihood by the trades and callings acquired during their residence.

The following summary shows the counties and cities from which the 120 pupils admitted this session, and the entire number that have been in attendance since the Institution was opened, were received from :—

	Admitted during this Session.	Total Admissions since opening.
Brant	4	8
Bruce.....	5	7
Carleton	2	3
Elgin	1	2
Essex.....	0	1
Frontenac	1	4
Grey	4	5
Haldimand	1	1
Halton	0	2
Hastings	5	8.
Huron.....	6	7
Kent	4	5
Lambton	0	1
Lanark	1	1
Leeds and Grenville	5	7
Lennox and Addington.....	0	1
Lincoln	3	5
Middlesex	4	10
Norfolk	6	7
Northumberland and Durham	7	8
Ontario	2	6
Oxford	2	2
Peel	0	0
Perth	2	5

	Admitted during this Session.	Total admissions since opening.
Peterborough	4	5
Prescott and Russell.....	1	2
Prince Edward.....	3	3
Renfrew.....	1	1
Simcoe	2	3
Stormont, Dundas and Glengarry.....	6	7
Victoria	2	2
Waterloo	3	5
Welland	1	1
Wellington	5	9
Wentworth	4	4
York	6	10
City of Toronto	7	9
“ Hamilton	3	5
“ Ottawa	0	1
“ London	5	5
“ Kingston	2	2
“ St. Catharines	1	1
	<hr/> 120	<hr/> 181

The Nationalities and Religious Denominations of these 181 blind pupils were as follows :—

RELIGION.

Presbyterians	33
Episcopalians	42
Methodists.....	62
Baptists	11
Roman Catholics	22
Quakers.....	2
Other denominations	9
Total	<hr/> 181

NATIONALITIES.

English.....	52
Irish	41
Scotch	18
Canadian	63
United States	3
Other Countries	4
Total	<hr/> 181

The large and increasing number of inmates argues the necessity for extending the accommodation provided in the present building. From returns received, it is beyond a doubt that there are some 280 blind persons of school age resident in the Province. The present buildings are calculated for a maximum number of 100 pupils, and more room is urgently required to secure the health and well-being of the present number of inmates, as well as in the interests of those who will otherwise grow up in ignorance and dependance. The original plan of the present building contemplated the erection of two wings in extension, for dormitories, class-rooms, etc. The erection of at least one of these has become a necessity, and I have, therefore, recommended that an appropriation be made for the

purpose, and for the extension of the rear addition, to provide increased domestic accommodation.

When this addition has been made, and the Institution rendered free to all, without requiring certificates of indigence, I trust that the compulsory clauses of the School Act will be enforced in the case of blind as well as in the case of deaf and dumb children. The result of domiciliary visits paid to the homes of these classes of physical defectives, proves the very urgent necessity of such a law, by means of which the unfortunate classes referred to might, while young, reap the advantages of such education and trades-instruction as would enable them to fight the battle of life to the best advantage.

The fact that only \$150 was collected during the year for the board of pupils, leads me to the conclusion that the following principles should be adopted in respect to admissions, and, if statutory power is needed, I would recommend that a Bill be submitted to the Legislature embodying the following regulations, viz. :—

1st. Compulsory attendance of all blind youths between the ages of seven and twenty-one, for such time as may be necessary in order to give them literary and industrial instruction.

2nd. Board, tuition and instruction to be free to all pupils.

3rd. Counties to pay for travelling expenses to and from the School, and for the proper clothing of all pupils whose parents are unable to defray such expenses. A fund for this purpose to be created, by the payment of a sum in proportion to the number of blind persons under twenty-one years of age residing within its limits, by the several counties of the Province.

4th. An industrial outfit to be purchased out of above-named fund, for any indigent pupil.

The increase in the number of pupils has already taxed the resources of the Institution to the utmost, and provision will require to be made for the purchase of bedsteads, mattresses, bedding, &c., for which an appropriation is asked. The laundry appliances also lack completion without the purchase of a mangle. An appropriation is also asked for the purpose of purchasing the increased number of books, maps and appliances for the literary department; tools, machinery and stock required for the industrial department; and for the musical instruments and music required for the musical department, all of which are rendered necessary by the increased number of pupils.

In addition to these sums, an appropriation is recommended for the purpose of continuing the ornamentation of the grounds, and for renewing the ornamental and fruit trees that were killed during the last severe winter, and for building a root-house, ice-house, etc., in order to complete the outbuildings.

In order to provide sufficient means for the extinguishing of fire, an appropriation is recommended to replace the steam boiler now in use at the pumping-house by one of more improved and economical construction, which can generate steam in a short time, and for a circulating boiler to supply the kitchen and pantries with hot water.

Several visits of inspection were made during the year, the first of which was during the month of April, upon receiving information that scarlet fever had broken out in the Institution. Although the cases reported appeared ten days before the day of my visit, no additional cases had developed; and, judging from appearances, it was likely that the disease would be confined within its then limits. But, as fresh cases appeared, it was deemed advisable to disperse the pupils, which was accordingly done.

The outbreak of this epidemic points to the necessity for the establishment of an isolated hospital, for the treatment of diseases of an infectious character in connection with this and all other public institutions where there are a large number of inmates. Fortunately in this case none of the cases proved fatal, as the type of disease was mild in its character.

Every department of the Institution was inspected at the time of my visit, and all were found to be in very good order, and giving evidence of good management. The want of play-rooms for the pupils, and the consequent use of the dormitories during the day time, caused them to be less tidy than was desirable; but instructions were given in my minutes that a better system of keeping the dormitories must be introduced, and means taken to exclude the pupils during the day time. 125 pupils had entered during the session, but ten had left for various reasons, and there were only 115 in residence at the time of my visit, of whom only five were paying pupils. The remainder were entered as orphans or free pupils. F

three pupils were receiving mechanical instruction, viz. : —In willow work, 21 ; and in cane seating, 14 boys and 18 girls.

In the middle of June, I again paid a visit to the Institution, to determine what repairs should be done during the recess, to prepare it for the ensuing session.

A third visit was made in September, shortly after the commencement of the sixth session. I found 103 pupils in attendance, or an increase of 14 over the number in residence at a corresponding date last year. A new feature in the admissions of the session is the preponderance of females over males, the number of girls admitted being 54, and the number of boys 49. This is not likely to continue, however, as the census returns show the blind male population to be twenty per cent. in excess of the blind of the other sex. Every part of the building was again inspected, and found to be in a clean, orderly, and well-kept state. The plastering, whitewashing, oiling and repairs ordered at my visit in June, had been done during the vacation, and much improved the general appearance of the Institution. The various class rooms were visited while instructions in reading, grammar, history, and music were in progress. The willow-ware workshops were also visited. The discipline in both literary and industrial departments was very good, and the pupils appeared to give interest as well as attention to their studies and work. The general appearance of the pupils was most satisfactory, all seeming to be healthy and happy.

Particular attention is invited to the very able and exhaustive Report of Mr. Principal Hunter, which will be found in the Appendix.

Annexed to the report will be found a detailed statement of the expenditure incurred for the maintenance of the Institution for the year ending 30th September, by which it will be seen that the entire cost amounted to \$24,033 54.

An estimate of the amount required to carry on the Institution for the year 1877 is also appended, which has been prepared with as much regard to economy as the efficient management of the establishment will admit of.

REPORT OF THE PRINCIPAL

OF THE

Ontario Institution for the Education of the Blind, BRANTFORD.

J. W. LANGMUIR, Esq.,
Inspector of Ontario Public Institutions,
Toronto.

SIR,—I have the honour to present for the official year ending September 30th, 1876 the Principal's Report of the Ontario Institution for the Blind.

Literary Department.

In my last Report I briefly described the leading systems of typography used for the instruction of the Blind ; their most important educational instruments and appliances ; finally, the types, instruments and appliances used in the Ontario Institution. During the past year the application of Point Print has received much of our attention. A very large number of pupils are now attaining such a mastery of this embossed character, as to use it with great facility for purposes of correspondence and taking notes of lessons. As formerly explained, though the Blind can and do learn to write manuscript in the ordinary character used by the seeing, they are quite unable to read their own writing, or indeed to distinguish by the touch a written from an unwritten page, unless the writing should be unusually rough. It is just here that Point Print becomes available. Though this alphabet is represented by combinations of raised dots, and appears intricate, it can with a fair amount of attention be readily read or written. In urging the study of this most important branch of instruction, I was for some time arrested by the difficulty that the only available text book for beginners—Mr. Wait's Point Primer—had passed out of print, and was no longer procurable. In this strait I set about devising an inexpensive process by which I could print within our own walls, such lessons as may be found necessary and could not be otherwise procured in printed form. It was essential, not only that a relieve impression should be obtained on paper, sufficiently sharp to be easily tangible, but that the impression should in the process of printing be so hardened as to resist compression by the blind reader's finger. The experiments necessary to secure these joints, consumed, for some months, all my leisure moments, which, as you are aware, are at no season of the year abundant. Miss Tyrrell kindly acted both as compositor and proof-reader, and I had thus the satisfaction of placing in the hands of our pupils, a Point Primer, that they find very legible, accurate, and free from the irritating sharpness of the primers as originally printed. Taking advantage of the opportunity, Miss Tyrrell prepared an appendix, illustrating the application of Point Print to commercial arithmetic, and this has been bound up with our copies of the primer. Then gathering courage as we proceeded, we developed this arithmetical appendix into a systematic treatise on arithmetic. In arranging the subject matter, I have adopted the principle of teaching by graduated examples worked out, and the so-called arithmetical analysis has been applied to the solution of all questions not purely mechanical. Only a few pages still remain to be printed, in

order to complete the first Point Print Arithmetic. The pupils now receive daily drill in the useful applications of this subject, and they are becoming quite skilful in taking down and casting up accounts. The potential value of such instruction is obvious. In England the legal status of blind persons has been the subject of considerable difficulty and of special legislation; it was even doubted for some time whether a blind person could make a valid will, and, in money matters, much hardship has arisen from inability to keep accounts in a form recognizable by the blind writer himself. With, however, the general use of Point Print by the Blind, such disabilities must vanish. Documents written in this character are definite and unvarying in their interpretation as those legally valid wills that eccentric Englishmen sometimes indite in the dead languages.

There is a serious defect in all the appliances yet used for the writing of Point Print: the characters are *written* on the side, and in the order reverse from those in which they are *read*. This is, of course, a great embarrassment to the learner, and, in arithmetic, as the results at every stage of the work have to be taken up and carried forward, the inconvenience of repeatedly turning over the sheet of paper becomes a serious impediment to progress. I commend this subject to the consideration of my inventive brethren in the United States' Institutions. I have myself spent some time fashioning, in rude model, a "guide," by which a relief impression can be raised on the writing side of the paper; and I purpose, whenever opportunity offers, to complete my experiments in this direction. The precision required in all Point-Print appliances renders their construction very tedious and expensive. In a recent announcement, the Council of the British and Foreign Blind Association present us with the fruit of their experience in the statement that "no one who had not made the attempt can have any idea of the extreme difficulty of combining great accuracy and durability with cheapness." There can, however, be no doubt that, were the same intense thought and active invention which abound on the highways of commerce and manufactures turned into the by-paths of philanthropy, and specially directed to appliances for the blind, the lot of this afflicted class would be much alleviated. But an invention for the use of blind persons offers no hope of emolument, and, in a pecuniary sense, is not worth patenting: the inventor must accept the reward of a good conscience as the interest of his expended money, time and thought. American Institutions are honourably distinguished for their many ingenious inventions tending to lessen the disadvantage of blindness, and they well deserve the warm praise lately bestowed upon them by Professor Fawcett, the well-known lecturer and publicist. In our own Institution, it would be an exercise of wise economy to devote annually a liberal expenditure to the designing and improvement of educational appliances. During last Session, we undertook the construction of some large physical dissected maps that were not purchaseable. One map was completed, but the inconvenience of carrying the work repeatedly, between the Institution and the factory—a mile and a half distant—was such that I have deferred the manufacture of other maps until the work can be superintended in the building.

Miss M. Scott has, by her energetic handling of geography, made it a very attractive subject to our pupils, many of whom have already acquired such a minute acquaintance with our railroad systems and other unfrequented tracts of school geography as greatly surprises the visiting public. I am very anxious that our teachers should be promptly supplied with such appliances as they find necessary for the thorough treatment of their subjects; but I have been hitherto much cramped by the lack of proper tools and motive power. The latter want has recently, through your kind exertions, been supplied, and I hope that the coming year will bring us a good lathe, a scroll saw, and those other tools for the shaping of wood and metal that are, or ought to be, in constant requisition in an educational Institution of this special character.

With the imperfect instruments at my command, several new appliances have been constructed during the year. I have already noticed the printing of Miss Tyrrell's class books. A flexible rubber writing tablet of my own contrivance is now being used by the pupils, instead of the old French writing card, and I have devised a piece of apparatus for turning out these improved tablets with speed and accuracy. Miss Scott has extended her new process of printing to the reproduction of small class-room maps; notes on English literature are also being printed for the use of her class. Mr. Wickens has, with the assistance of the carpenter, G. G. Lambden, completed an excellent dissected map of the United States, which is on exhibition, with some other products of our industry, at the Centennial Exposition.

Since my last Report, some additions have been made to the list of embossed line-type publications. Mr. Kneass, of Philadelphia, has published the Poet Laureate's *Enoch Arden*, and he has printed for the National Association, Marcx's valuable work, *The Universal School of Music*, so as to form two companion volumes to the same author's *Dictionary of Musical Terms*, already issued from Mr. Kneass' press. The American Printing House for the Blind (Louisville, Ky.), has laid us under fresh obligations by reproducing, with the assistance of a new stereotype process, Sir Walter Scott's *Lady of the Lake*; also, by issuing several excellent school books at prices that barely cover the cost of publication. In these new publications the important typographical changes proposed last year have been adopted.

In order to bridge over the interval from the old type to the new, I requested Mr. Huntton, the unwearied Secretary of the American Printing House, to kindly print for the use of our pupils special letter and word sheets in the reformed typography. With a little preliminary drill on these sheets, our pupils are found to read with great facility the new publications.

At the Convention of Instructors of the Blind recently held at Philadelphia, and attended by a very large number of representatives from the various States of the Union, a resolution was passed strongly commending the American Printing House to the liberality of Congress, and urging that it receive a subsidy, or an endowment in the form of public lands, to the amount of \$100,000. If this appeal should fortunately prove successful, the education of the blind may be expected to enter on a new era.

Among the announcements made in the Literary Department of the Philadelphia Convention, was the application of the newly introduced type-writer to the use of the Blind. With the sightless, writing in any of the existing forms, is a most painfully slow process, and blind authors have hitherto, almost without exception, been forced to employ an amanuensis. By the aid, however, of the new mechanism, it is asserted that an expert blind operator can print off, in a given time, a report of a speech or a lecture, in a form two or three times as extended as can be reached by a seeing reporter, using ordinary written characters. The manufacturers describe this interesting appliance as follows: "The type-writer in size and appearance resembles the family sewing machine. Its appearance is graceful and ornamental, making it a beautiful piece of furniture for any office, study or parlor.

"Writing with this machine is done simply by touching keys, which are compactly arranged in four rows of eleven each, and may be operated by any finger of either hand. On each key is plainly printed the letter or character it represents by depressing any key, the corresponding letter is printed on the paper. The "action" is fully as rapid and much easier than that of the piano. It will thus be seen that any desired letter or character is completely transcribed in the same time, and by the one motion that is required to bring a pen with the first position. Its rapidity is therefore manifest. Its simplicity is such that anyone who can spell can write with it, and its manipulation is so easily understood, that but little practice is required to enable the operator to become an expert in its use. It writes from one to twenty copies at the same time. The size of paper which can be used is practically unlimited, as it is adapted to any width from one inch to a continuous roll. Envelopes can be readily addressed with it. It is equally adapted to any thickness of paper, and the quality of paper is also unlimited, as it will write legibly on the commonest wrapping paper. The alphabet, numerals, and all necessary characters for punctuation, italicizing and reference, are made by it. It is instantly adjustable to any desired spacing between lines. The type receives ink from a moving ribbon, one and three-eighths inches wide and thirty-six feet long, and as each letter takes but one-eighth of an inch of space, for a single impression, there is practically over 400 available feet of inking surface. The ribbon is so prepared that it can be used for months without being inked, and when exhausted the ribbon can be sent by mail to the General Office and re-inked at a trifling expense. With proper usage these ribbons will last for many years." Mr. Superintendent Smead, of the Ohio Institution for the Blind, reported to the Convention the results obtained by his pupils with four type-writers, as very encouraging. Principal Campbell, of the Royal College for the Blind (Upper Norwood, London), who, from his entire sightlessness, is specially entitled to speak with authority on a question of this kind, regards the type-writer "as destined to exercise much influence upon the higher education of the Blind, and (he believes), to furnish remunerative employment for Blind females." He adds that proof copies of the Report from which this extract is taken, were prepared for the Executive Committee of the College on one of these machines. In view of

the favourable opinions expressed by these educationists, I would recommend that one or two type-writers be added to our school-room appliances. I have now before me a type-written letter from J. W. Smith, Esq., Professor of piano-tuning in the Boston Institution. Mr. Smith is entirely sightless, but he can evidently use the type-writer to most excellent purpose. Through this new medium of communication he announces still another invention for the Blind, an ingenious contrivance of his own, (the Daisy Tablet), by which a complete character in the French (or Braille) Point Print can be written at once, and not laboriously written, as at present, one point at a time. Before leaving the literary work of the past year, I have to acknowledge two kind donations to the Institution library. To Captain T. V. Scott, of Ottawa, I am indebted for several volumes of Dr. Moon's embossed edition of the Scriptures, the legacy of a blind lady, lately deceased. I have also received, from an anonymous donor, through Messrs. Rowsell & Hutchinson, Booksellers, Toronto, a miscellaneous collection of embossed publications. My acknowledgments are due to the Hon. David Christie, Speaker of the Senate, for the blue-books and daily proceedings of the Dominion Parliament, during its last session.

In my report for 1874 I suggested that Telegraphy might be brought within the range of the Blind. By the kindness of W. Griffin, Esq., the Brantford Agent of the Dominion Telegraph Company, the wires and necessary appliances have been introduced into the Institution, and a class has been formed with Mr. Wickens as instructor. The results of this novel experiment cannot fail to be interesting and instructive.

Musical Department.

In the Musical Department we greatly require additional instruments. Though the attendance of pupils has within a short period doubled, the educational outfit of the Institution remains precisely as it was when but half the present attendance was provided for. The present demand for musical instruction would necessitate the purchase of two reed organs, besides the piano recommended in my last report, but not yet procured. I have already brought under your consideration the completion of our Music Hall, by the purchase of a large pipe-organ, such as is found in every important Institution for the Blind. Miss Alexander and Mr. Truss visited, during the summer vacation, various British Institutions for the Blind, and though these derive but a precarious and intermittent support from private charity, the managers attach so much weight to high-class musical instruction that they have in nearly every case drawn on their slender revenues to procure a good church organ. Indeed the importance of music in every system of training for the Blind is now fully recognized by all educationists; and, in music, as in literature, the works of the best masters have the highest educational value. If not in 1877, at all events in 1878, I trust that we shall be supplied with an instrument adequate for the worthy rendition of oratorios and other sacred music of the highest class. Professor Cheesbro has devised a Musical Dial, which being applicable for the instruction of the seeing as well as the Blind, he has taken steps to secure by copyright. As inquiries have been made respecting this Dial by the musical instructors of other Institutions, Professor Cheesbro will be allowed, in his own words, to state its range and capabilities: "The Dial will form any musical scale, major or minor, from C to 7 sharps, or from C to 7 flats, also every interval of these scales, give their harmonic names, and show the *Do, Re, Mi*, system with any and all intervals of any or all scales. It will also show the Tonic or Key-note of any and all scales, indicate what the note is Key-note of, and how many sharps or flats, showing their proper position on the staff; then immediately showing the fingering for both hands for any or all keys, also the common chord and its relative minor of any and all keys; then shows the Dominant chord of the 7th and its resolution, and the Diminished chord of the seventh and its resolution. It likewise shows all time movements used, and the proper placing of the accent in such time; the common alphabet in the Bass and Treble Clefs; the valuation of time and rests; position of Bass, Treble, Alto, and Tenor Clefs; the number of vibrations per second necessary to produce Middle C on the piano, and for the octave up to C third Space (Chromatically); the lengths of string which when weighted will give any Metronome movement used; the compass of voices, Soprano, Mezzo-Soprano, Alto, Tenor, Baritone, and Bass, showing the Chest, Medium, and Head registers of all, according to Bassini. It defines the latitude allowed in Allegro, Andante, and other move

ments; the fingering for all brass instruments working on 3 or 4 valves, Bass Clef (Chromatically), and full compass of the instruments. Finally, the Dial shows the character of all keys, also all intervals of the scale, whether diminished, perfect, flat, sharp, or augmented." This cyclopædia of musical memoranda is contained on a card of some eight or nine inches diameter.

A very pleasing feature of the past year was the fortnightly musical and literary entertainments given in the Music Hall, but open only to residents of the Institution. The pupils were prepared for the musical exercises by Miss Alexander, who has attained great skill as an instructor of the Blind, while her devotion to her work is unremitting. The recitations and dialogues were selected and arranged by the literary teachers. These entertainments exert a most valuable æsthetic influence on the Blind, whose bearing and address are often susceptible of much improvement.

Technical Department.

In the Technical Instruction of the older boys no change has been made since last report, except by the extension of the cane-seating classes. I have made an arrangement with the Brant Furniture Co., by which the pupils are supplied with chair-frames and cane, while a small sum is allowed to the Institution for the pupils' work. Basket-making continues to be the leading feature of the boys' industrial department. Where workshops are occupied by co-operative blind artisans, and administered by a sighted Superintendent, mattress-making and certain other employments are sometimes found more remunerative; but for blind men dependent upon individual capital and skill, willow-work appears to me to possess three decisive advantages over every other trade that has yet been proposed. *First*, the manual labour required is of so varied a character that it can hardly be displaced by machinery. *Secondly*, the tools are strong, simple, inexpensive—and with moderate care, will last a lifetime. *Finally*, the raw material required can be grown on any ordinary soil; for modern research has shown that the willow like many similiar plants inhabits swampy grounds, for the sufficient reason that *it is not permitted to grow elsewhere*, and that if so permitted it improves as much by cultivation as those more brilliant favourites of our flower gardens which were once insignificant and worthless occupants of the marsh. During his recent visit to England, Mr. Truss the trade instructor, made inquiries into the comparative value of various employments, as furnishing a livelihood to the blind, and willow-work appeared to stand the highest among the various mechanical employments that have been tried. The introduction of broom-making into the Institution has often been suggested, and Mr. Truss has qualified himself to give instruction in it; but I am of opinion that the concurrent manufacture of brooms and willow work would lead to the neglect of the latter, because broom-making is much more readily acquired, though, when examined by the three tests above applied to willow-work, its inferior value as a trade for the blind is manifest.

In the girls' industrial department several new features have lately been introduced. At the Philadelphia Convention Mr. Wait of New York announced that he had succeeded in bringing machine-knitting within the reach of blind girls, and Miss Porad, a pupil of his Institution, gave interesting exhibitions of her skill both at the Convention and at the Centennial Exhibition—at the latter as the representative of the Dana Bickford Knitting Machine Company. I lost no time in procuring from this Company an experimental machine for the benefit of our pupils. This I placed under the charge of Miss Tyrell, who, in a wonderfully short time, has not only mastered the details of the mechanism, but has taught six of our blind girls to knit with great facility. These results were so encouraging that I recommended the immediate purchase of additional machines, which are now on the way from New York. The demand for socks at the Central Prison will furnish our girls with excellent practice in both hand and machine knitting.

Miss Elliott, our energetic Housekeeper, has made a series of experiments to determine which form of sewing machine is best adapted for the use of the blind. The results of these interesting experiments so far appear to favour the use of a bobbin-machine (such as the Wheeler & Wilson), rather than of a shuttle machine. I would recommend the purchase (at as early a date as possible) of additional sewing machines such as these experiments may finally approve.

A large number of pupils, both male and female, have been instructed by Miss Tyrell

in the many forms of bead and crotchet work, many of the articles produced being characterized by great harmony of colour, symmetry of form, and beauty of design. Among recent novelties of fancy work, may be mentioned embroidery on perforated eard.

Under the tuition of Miss Alexander and Miss Scott, many of our little boys, as well as girls, have learned to use deftly their crotchet and knitting needles.

Religious Instruction, &c.

My warm acknowledgments are due to the Brantford Clergy for their regular attendance at the Sunday services of the Institution. Our Catholic pupils have not only the kind oversight of the Rev. Mr. Bardou, but also weekly visits from the Sisters of St. Joseph. The Institution has now a continuous plank walk communicating with all the churches in Brantford, and the pupils possess much greater religious advantages than formerly.

The Young Men's Christian Association has befriended our inmates in many ways. Mr. George Macdonald (Secretary of the Association), and Mr. S. M. Thompson have been particularly kind in their attentions. Private philanthropic effort is witnessed in Brantford on a scale that can be hardly paralleled elsewhere in Ontario; and one of these private charitable institutions (maintained by T. S. Shenstone, Esq., and I. Cockhutt, Esq.) opened its hospitable doors to one of our poor blind children when she had been cast off by an inhuman municipal Council, and was thus left without a home during the summer recess.

Domestic Department.

Under Miss Elliott's administration the Domestic Department has maintained a high degree of efficiency. Her efforts have been seconded by the introduction of many conveniences and appliances into the kitchen and laundry, which ought really to have formed part of the original outfit of the Institution. I observed last Christmas Day by setting into position two ranges and a broiler manufactured by Bramhall, Deane & Co. (New York), which have greatly relieved the pressure on our culinary service. To complete this most serviceable apparatus, we still require a "circulatory boiler" furnishing a constant supply of hot water for domestic purposes. The Laundry has been furnished with one of Oakley & Keating's (40 Cortlandt St., New York) "Extra Large" washing machines. This contrivance is named by its makers "The Nonpareil," and very fairly, for it appears to be the most effective laundry machine at present in the market. It has proved an unspeakable convenience to us, at once reducing to one-half, the time occupied in washing; and rendering us less dependent upon the manual labour of servants whose proverbial restiveness and caprice often much disorder the administration of Public Institutions. To complete the equipment of our Laundry we still require a power-mangle which ought of course to represent the most improved mechanism procurable. The engine that actuates the washing-machine will also afford motive power for the mangle, and in placing the line shafts, I have provided for this contingency. To the manufacturers of this new engine and its attached boiler (Messrs. Waterous & Co., Brantford), it is only due to say that this machinery affords me the utmost satisfaction. The economy of fuel secured by the use of the new boiler is as surprising as it is gratifying. I have so connected this small "auxiliary" as to furnish steam to the engine-pump in the basement, to a line of jacketed kettles in the kitchen, to a large soap-tank, to the washing-machine, and to tiers of jacketed vessels and washing-vats in the Laundry; to the drying-room on the ground-floor, and to bath-rooms on the second floor. The plumbing and fitting involved in these and in the many other improvements recently made in our steam, gas, and water service have been executed in a most careful and workmanlike manner by Mr. John Marter, the Institution Engineer, assisted by the Fireman, James Kelly. The large boilers in the basement are now almost entirely reserved for the heating of the building, which is of course suspended whenever the temperature of the external air permits. This office of heating the building demands a large volume of low-pressure steam, whereas the culinary and other services above enumerated require the precisely opposite condition of a small volume of high-pressure steam. Any attempt to combine these two conflicting requirements will result in a lavish use of fuel as well as a severe and quite unnecessary strain on the general heating equipment, and a consequent large expenditure for repairs and renewals. To render

our heating-boilers more efficient for their special function, their steam-space has been enlarged by the removal of the highest tier of tubes, while the draught has been maintained by the insertion of additional tubes on the right and the left of the remaining tiers. The brickwork encasing each boiler, has also been so modified as to become in effect a super-heater, and thus dry the steam before it leaves the boiler. During even the brief interval that has elapsed since the erection of this Institution, immense strides have been made in the application of steam to the heating of public buildings, and we must endeavour to keep abreast of these recent improvements.

The capacity of each of the four water tanks that are under the Institution roof was this summer enlarged by one half; but the pumping engine that fills three of those tanks, and forms our main reliance in an outbreak of fire, is sadly hampered by a most inefficient boiler which ought at once to be replaced by a boiler of more modern construction, and able, without using special fuel, to raise steam in fifteen minutes. The chimney over the boiler-house was recently repaired in the hope that the present hazardous delay in raising steam might be avoided, but it is now quite evident that a new boiler is indispensable. I cannot too often repeat that, in the event of a fire, this Institution would be entirely dependent upon its own water works; and the thorough efficiency of all our appliances thus becomes a question of the utmost importance. A good hose reel filled with a reserve of one inch rubber hose would prove a valuable addition to our present equipment. To secure the utmost vigilance on the part of the night watchman, I require of him to strike every hour from ten o'clock p.m., to five o'clock a.m., on the tower bell; also, to record on Lefort's Patent Detector, the precise times at which he goes his rounds. This responsible post is filled by G. G. Lambden, whom I have to commend for his faithful services both as watchman and carpenter.

The storage of our fuel deserves attention. At present a very large quantity of the coal becomes saturated with rain and snow to the great injury of the fuel. In these enlightened days few engineers or firemen will deliberately wet their coal to improve combustion, except such as wet their own jackets to promote animal warmth. The section of our coal shed that is now occupied as an ice-house ought to be restored to its original use, and the whole framework of the building strengthened by plank sheeting. A combined root and ice-house is much required, and ought to be provided for.

The men employed in the boiler-rooms frequently complain of headache and other ailments arising apparently from insufficient ventilation. I would recommend that a galvanized iron pipe of twelve inches diameter, be carried from each of the basement boiler-rooms vertically upwards through the roof of the rear building. One of those ventilating shafts would thus traverse the laundry and the girls' dining-room,—the other, the kitchen and the boys' dining room; and by suitable valves would draw off the exhalations that are apt to stagnate in such places. The main smoke-stack has already so many openings that the draught is somewhat affected, and it would be far preferable on both this and other grounds to provide independent ventilating shafts in the manner just indicated.

An outbreak of scarlet fever among us last season very forcibly revived the question of providing for the sick, an isolated hospital, or at least detached hospital wards. Except in the case of one of my own children, the epidemic that passed over us was of a very mild type, but so large a number of pupils were more or less affected by it, it was found necessary to close the session earlier than usual. Under Dr. Corsou's professional skill and the attention of careful nurses,—among whom Miss Hudson deserves especial mention,—none of the ill effects followed that often render scarlet fever more formidable in its results, than in its direct assault. Now that the attendance of pupils has become so large, the Institution ought, in my opinion, to enjoy the advantage of a daily visit from the staff physician. It is well known, that the vitality of the blind is much lower than that of the seeing. Even in Institutions like our own, where regular hours, open air exercise, and an abundance of wholesome food, insure to the blind inmates a far higher average of health than they enjoy elsewhere, there is an evident deficiency in vital force as compared with seeing children similarly circumstanced. This important point has been elaborately investigated by Mr. E. B. Elliott, a Boston actuary, and from his tables recently published, I find that in 1,102 blind persons admitted to United States Institutions, the power to resist destructive influences was 10.3 less than that of the population of all England, and that the number of deaths is from 60 to 80 per cent. greater than the number required by the English life-tables. Principal Campbell—who

belongs to the class of whom he writes—discusses this question in the last edition of the *Encyclopedia Britannica*, and remarks that, if the basis of calculation were not confined to the fortunately-conditioned inmates of Institutions, but extended over the whole blind population, the average vital force would probably be found “*nearly one-fifth less than that of ordinary persons.*” Principal Campbell does not pursue this interesting question further; but, assuming the facts to be as represented, it is evident to my mind that we have here a vital law, the applications of which ought to determine for Institutions their sanitary, dietary, and general domestic engagements; and ought also to some extent to set the gauge of their expenditure, both as to amount and direction. For example, using the last result above stated, it follows that where *five* ordinary persons may, without detriment to health, occupy simultaneously the same class-room, or sitting-room, or dormitory, only *four* blind persons would be admissible. My own observations on the quality of the atmosphere, where our pupils have been for a short time assembled, would confirm the above theoretical result.

Additional Accommodation Needed.

The number of inmates now in this Institution has far outrun our estimated maximum accommodation, and the extension of our buildings cannot be deferred without injury to the present inmates, and without the greatest injustice to the large number of youthful blind who still remain neglected, and who, year by year, are growing up in a state of mental as well as physical paralysis. The observations contained in my last Annual Report, respecting the deplorable condition of uneducated blind, and respecting the urgent need of an enactment similar to the compulsory clauses of the Public School Act, have been greatly confirmed by the results of this year's official visitation of the Blind. The work so well done by the late officer, Mr. Brown, has been vigorously taken up, and carried forward by his successor, Mr. Walter Wickens, who has exhibited much tact and diligence in the execution of his mission. I have now recorded in my office the names and addresses of 280 blind minors residing in Ontario, and in the majority of cases I have collected information as to their mental, physical, and social condition. Our search for the blind will hereafter be much facilitated by the co-operation of the Educational Department, in the way that I suggested in my Report for 1874. As soon as ever the matter was brought under the notice of the Honourable the Minister of Education, he arranged to obtain from all future Annual Reports of Public School Trustees the names, ages, and particular addresses of those youth who, from either physical or mental infirmity, are debarred from the advantages of a Public School; thus in effect requiring of Public School Inspectors to account satisfactorily for the whole school population of their districts. As this machinery gets into full motion, it will turn out annually a complete and authoritative census, which will enable this and other special Institutions, to effectually use such powers as the Legislature may intrust to them. Without, however, waiting for any complete census of the blind—which would involve a serious delay—it might be quite safely assumed, that with suitable legislation next session, an attendance of from 200 to 250 youthful blind can at once be had, and, concurrently with such legislation, adequate accommodation and educational equipment must, of course, be provided. The enactment now required should embrace these two essential points:—(1.) The training of the Blind ought to become compulsory, and attendance at this Institution ought to be enforced by statutory provisions similar to those in the Public School Law of this and other countries, and similar to the compulsory Act relating to the Blind of Pennsylvania. As is found in the administration of our Public School Act, the presence of such a provision on the Statute Book need only be hinted at, to bring neglectful parents to a recollection of their duties. Few indeed are so indifferent to public opinion as to desire an appearance before a magistrate on the charge of neglecting their own offspring. The age for Institution purposes ought to range between seven and *twenty-one*, as a considerable number of persons become blind after attaining twelve (the Public School limit), when their special tactile education has to begin, as though they had never been trained at all. In dealing with the great variety of cases that will come up for consideration, the Principal of the Institution will require considerable discretionary power. (2) The second requirement—without which the first would be utterly futile—is that a fund be provided for the clothing and travelling expenses of indigents. This fund might be raised by imposing on each county a small annual

capitation allowance for each blind resident under twenty one years of age, *whether in attendance at the Institution or not*, so that no motive might arise for the detention of the blind. Though the burden on each county would be utterly insignificant, the total fund would be considerable; and if any surplus should arise, it would most suitably be expended in giving our trained apprentices (female as well as male) a mechanical outfit which would relieve the municipalities of indigent adult blind, and thus refund, with large usury, to those corporations, their annual contribution to this Institution fund. These finished apprentices ought for some time after their discharge to be kept under a friendly surveillance, and periodically visited, with a view to removing, as far as possible, the special difficulties that arise from their sightless condition. The massing of adult blind at a central point, even though it be an industrial home, does not commend itself to my judgment; the experience of every such establishment is, that, as a combination, blind artisans are apt to do less for their own support than when dependent upon their own individual capital and skill; and every such workshop has a serious annual deficit. The distribution system here recommended is certainly more natural, it does not interfere with the family relation, and under judicious advice and encouragement the blind artisan will more probably develop the sterling qualities of self-reliance, industry, and thrift. The objections to *Asylums* for the Blind are still more cogent. If the Institution system is made thoroughly effective, the class of persons requiring, or at all events deserving, asylum relief will speedily disappear, and there is immeasurably less objection to making a special but temporary provision for the present generation of aged and indigent blind than in committing ourselves to a permanent heavy outlay for Asylums which once opened could not readily be closed. The thorough, and if necessary enforced, training of our youthful blind constitutes the key of the whole position, and to their training, technical as well as literary, we ought to direct our most strenuous exertions. Their number and requirements are the factors to be considered in extending and outfitting our Institution. The details under these heads will more appropriately form the subject of a special Report.

Institution Visited—Improvements on Grounds.

Since writing my last Annual Report, not only has the Institution received the frequent and welcome visits of Mr. Inspector Langmuir—the great value of whose official connection with the Institution I thoroughly appreciate, but also, several members of the Government have, by their presence among us, greatly sustained and encouraged us in our work. His Honour, the Lieutenant-Governor, and the Hon. Provincial Secretary, officially visited the Institution and grounds. The Hon. Commissioner of Public Works, after a personal examination of the grounds and premises, approved of certain important expenditures that had formed the subject matter of your official recommendations. I was authorized to take measures for the security of the Institution terrace, and the building itself, against the floods of water that, at every shower, ploughed the sand into deep gorges, and threatened to sweep terrace, Institution and all into the valley beneath. I carried a carefully laid open brick drain along the brow of the embankment to the distance of about 500 feet, drawing off the water at intervals by ducts leading to the low ground below. The embankment, which is no better than a quicksand, I bound together by a heavy dressing of swamp muck, that speedily became overgrown with coarse strong grass, finally, the terrace itself after being prepared with a surface of gas-lime, was protected from the local action of rain or melting snow by a deposit of gravel, which in places exceeds six inches in depth. The large mass of material required for this work, I drew from our lot on the Grand River.

Substantial progress has been made in the ornamentation of the grounds, though the rainless and scorching summer has killed many of our trees. Enough, however, survive to prove a great relief to the treeless waste that has hitherto surrounded the Institution. Notwithstanding the severe drought of the season, the cultivated grounds have, through the industry of the farmer, James Williams, and the gardener, Robert Ward, yielded an unusually good return of vegetables and farm products, potatoes being the only crop that is noticeably deficient.

The difficulty connected with boiler drainage, has been satisfactorily disposed of by conducting it directly into the main-drain. External latrines on improved sanitary principles have been erected.

The question of sidewalk communication with Brantford is now happily disposed of.

I presented to the Brantford Town Council petitions signed by four hundred of the leading ratepayers, requesting that the Dumfries street walk be continued to the southern boundary of the Institution grounds. I am much indebted to the Mayor and Corporation of Brantford for their alacrity and public spirit in laying this extended sidewalk. At its termination our system of sidewalks, uniform in width, commences, and leads the visitor to the main door of the Institution. A six-foot plank walk has also been laid from the rear door of the west-wing to the workshop, and thence to the lower engine-house and spring. On the residents, and especially the blind residents of this Institution, no greater boon than these sidewalks could have been bestowed. The Hon. the Provincial Secretary made a second official visit to the Institution to obtain data for considering the enlargement of the premises.

The Hon. the Premier also found opportunity amid his incessant engagements to visit us, and spend some time in examining our improved educational appliances.

A few days ago, while engaged on the official visitation of the High and Public Schools of Brantford, the Hon. the Minister of Education kindly accepted an invitation to come up and see us at work. The various industries of the Institution were shown in actual operation in the Music Hall, and the Hon. Minister expressed himself greatly gratified at the new and somewhat startling applications of blind labour. He addressed to the pupils words of kind sympathy and encouragement.

Among other visits with which we were favoured, may be noticed those of the Grand Juries, who have commended us to the still further liberality of the Government; the visit of the Grand Division of the Sons of Temperance, headed by G. W. Ross, Esq., M.P.; finally the visit of the distinguished blind orator, the Rev. W. H. Milburn, to whose lecture, "What a Blind Man saw in England," our pupils were admitted through the great kindness of the Young Men's Christian Association, and who, on the following day, at my request, came up to the Institution, and, after minutely examining our work and appliances, addressed the pupils. Mr. Milburn, as one entitled to advise those who shared his own affliction, skillfully and tenderly swept the sympathetic chord; then rising into a strain of brilliant eloquence, he showed these unfortunate youths of what magnificent achievements the Blind are capable.

I have honour to be, Sir,

Your obedient Servant,

J. HOWARD HUNTER,
Principal.

REPORT OF THE PHYSICIAN OF THE ONTARIO INSTITUTION FOR THE EDUCATION OF THE BLIND.

J. W. LANGMUIR, ESQ.,

Inspector of Prisons, Asylums, &c., &c.

SIR,—In furnishing you with a general statement and facts respecting the Medical department of this Institution, I have, first of all, the satisfaction to observe that no deaths have taken place within its walls during the current year. It is my painful duty, however, to mention the death of the excellent teacher, Prof. T. M. Brown, which took place at his residence in the town on the first day of October, 1875. Of a naturally delicate constitution, with a frame still further enfeebled by excessive journeys on foot in the good cause of the Institution, he had the misfortune to contract a malignant form of Typhoid Fever, which, in a little more than a week terminated his useful life.

According to a suggestion made in my second annual report, new water closets, supplied with an efficient drain, were constructed last vacation under the personal supervision of the Principal, so that all sewerage waste is now discharged at a safe distance from the buildings. With this provision all danger of water contamination, or the admission of foul air into any apartment seems past, and we may congratulate ourselves on a thorough protection against Typhoid Fever, or other diseases depending upon a like specific blood poison. Indeed, it may be remarked that though Typhoid Fever is a constantly recurring

disease in the town, there has never been a single case in the Institution, a fact which attests favourably of its sanitary condition.

In the effort to keep out the cold during the winter months by sealing up the windows with storm sashes, it is to be feared that fresh air has been at the same time too much excluded, the effect of which has been that peculiar odour, so easily generated in public buildings of this nature. It shall be my duty in the future to insist upon what I have had much difficulty in enforcing in the past, viz., such a thorough ventilation as will ensure a constant supply of fresh air. With the increased number of pupils in residence, such a precaution becomes imperative. I may here also remark that the recent accessions to our number will necessitate very considerable additions to the present buildings in order to meet the prospective needs for accommodation, for by the timely erection of such additions will the evil and danger of overcrowding, which now threaten us, be effectually prevented.

During the month of March last, a child of the Principal and one of the pupils were simultaneously attacked with scarlet fever in rather severe form, though ending in protracted recovery. After the lapse of two weeks, other pupils were down with the same disease, and after a few weeks more there was a third group, until the whole number was swelled to eleven cases, all of which passed through the disease safely. Upon inquiry, it was found that only a small proportion of the pupils had ever been the subjects of scarlet fever, and there was therefore every probability that the number of cases after each period of incubation would be repeated in something like arithmetical progression, until the outbreak should become general. Under these circumstances, it was deemed prudent by the Government to close the Institution for the balance of the term. In this epidemic, we sadly felt the need of a separate building for hospital purposes to enable us to isolate the disease and thus prevent, if possible, its further spread.

Quite a number of pupils with eyes so diseased as to result in partial or complete loss of vision, come to the Institution every year for the purpose of receiving medical treatment, in the hope of having the sight restored, fully ten per cent in the now opening session belonging to this class. Though such an object was never contemplated by the Government, yet you will readily grant it will be only an act of humanity to give them the benefit of such special treatment, and our success in this direction is an encouragement to bestow such attention upon these unfortunate ones as time will permit. I cannot close without acknowledging the faithful services of the nurse, Miss Christie, whose kindness and attention to those under her care have been unceasing.

The subjoined Table will show at a glance the class of diseases for which we have been called to prescribe, though there have been many less serious ailments not here set down:—

Abcess, mammary	-	-	-	1	Epilepsy	-	-	-	-	-	2
Adenitis	-	-	-	1	Febriola	-	-	-	-	-	7
Acne, simplex	-	-	-	1	Furunculus	-	-	-	-	-	1
Amecorrhoea	-	-	-	1	Gastric derangement	-	-	-	-	-	1
Anaemia	-	-	-	1	Granular lids	-	-	-	-	-	6
Bronchitis	-	-	-	8	Indigestion	-	-	-	-	-	6
Broucheole	-	-	-	3	Lepa	-	-	-	-	-	1
Cataract (operation)	-	-	-	2	Neuralgia	-	-	-	-	-	2
Cephalgia	-	-	-	6	Neuritis, optic	-	-	-	-	-	-
Colic	-	-	-	1	Odontalgia	-	-	-	-	-	13
Cold, common	-	-	-	20	Phuritis, acute	-	-	-	-	-	1
Catarrh, naso-pharyngeal	-	-	-	3	Pneumonia	-	-	-	-	-	1
Cerumen, impacted	-	-	-	1	Retroversio uteri	-	-	-	-	-	-
Diarrhoea	-	-	-	7	Searlatina anginosa	-	-	-	-	-	11
" chronic	-	-	-	1	Trechinosis, operation	-	-	-	-	-	2
Debility	-	-	-	1	Tonsillitis	-	-	-	-	-	1
Dentition	-	-	-	1	Rheumatism, chronic	-	-	-	-	-	2
Dyspepsia	-	-	-	1	Ulcet, soft palate	-	-	-	-	-	1
Eczema	-	-	-	2							

I have been asked by the Principal if I were favourable to a law compelling attendance at this Institution of all the blind of suitable age within the Province. In my estimation

such legislation would be most wise, as great injustice is done to blind children by parents who, from mistaken ideas of kindness, allow their children to remain at home, only to sink into a mental as well as physical degeneracy, which falls little short of helpless idiocy.

I have the honour to be, Sir,

Your obedient servant,

WILLIAM C. CORSON, M.D.



Substitution for the Annual
Journal

Yours truly
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